



Amendments to the Specification

Please amend page 2 lines 2 - 19:

Performance of an optical system is also defined by a parameter called Q. The Q value (or Q-factor) indicates the 'useful signal'-to-noise ratio of the electric signal regenerated by the optical receiver, and is defined as follows:

$$\left[\left[Q = \frac{\mu_1 - \mu_0}{\sigma_1 + \sigma_2} \right] \right]$$

$$Q = \frac{\mu_1 - \mu_0}{\sigma_1 + \sigma_0}$$

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where μ_1 is the mean value of the '1's, μ_0 is the mean value of the '0's, σ_1 is the standard deviation of the level of '1's, and σ_0 is the standard deviation of the level of '0's. These parameters can be understood from looking at the so-called eye diagram, which represents the received signal, time-shifted by integer multiples of the bit period, and overlaid. The eye diagram can be produced on an oscilloscope by applying a baseband signal to the vertical input of the oscilloscope and triggering the instrument time base at the symbol rate. For a binary signal, such an eye diagram has a single 'eye', which is open or closed to an extent determined by the signal degradation. An open pattern is desired, as this provides the greatest distance between signals representing a 1 and those representing a 0. Changes in the eye size indicate inter-symbol interference, amplitude irregularities, or timing problems, such as jitter, depending on the signal that is measured.